

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (currently amended)

A multiple laser treatment apparatus, comprising:

- (a) n lasers, wherein $n > 1$ and each of said n lasers delivers a laser treatment beam selected for a treatment, and wherein said laser treatment beams have different laser beam parameters; and
- (b) a mirror-based optical delivery device to deliver said laser treatment beams in a combined treatment beam, wherein said optical delivery device comprises ~~three-dimensional~~ delivery means for scanning said combined treatment beam in a three-dimensional scanning pattern within a volume of biological tissue, ~~wherein said combined treatment beam has a spot size that is less than 0.1 mm, and wherein said combined treatment beam is delivered at a substance that undergoes a said treatment.~~

Claim 2 (previously presented)

The apparatus as set forth in claim 1, wherein said laser treatment beams have at least one of different wavelengths, different fluences, different power levels, different energy levels, different temporal parameters, different geometrical parameters, different spot sizes, different linear delivery parameters and different three-dimensional delivery parameters.

Claim 3 (previously presented)

The apparatus as set forth in claim 1, wherein said laser treatment beams have different wavelengths selected from a spectrum of wavelengths ranging from ultraviolet to far infrared.

Claims 4-5 (cancelled)

Claim 6 (previously presented)

The apparatus as set forth in claim 1, further comprising an optical component to select a laser beam parameter of one of said laser treatment beams.

Claim 7 (currently amended)

The apparatus as set forth in claim 6, wherein said optical component is one of a beam profiler, a collimator, a spherical element, an ~~a-spherical~~ aspherical element and a parabolic element.

Claim 8 (previously presented)

The apparatus as set forth in claim 1, further comprising means for controlling said n lasers.

Claim 9 (previously presented)

The apparatus as set forth in claim 8, wherein said means for controlling comprises a single control panel.

Claim 10 (previously presented)

The apparatus as set forth in claim 1, further comprising means for adjusting a laser beam parameter of one of said laser treatment beams.

Claim 11 (previously presented)

The apparatus as set forth in claim 1, wherein said n lasers comprise at least one of a gas laser, a liquid laser, a solid state laser, a semiconductor diode laser, a tunable laser and a flashlamp laser.

Claim 12 (currently amended)

The apparatus as set forth in claim 1, further comprising an optical path to transmit said laser treatment beams to said optical delivery device, wherein said optical path is one of an optical fiber, an articulated arm and a waveguide.

Claims 13-17 (cancelled)

Claim 18 (previously presented)

The apparatus as set forth in claim 1, wherein said optical delivery device further comprises a micromanipulator.

Claim 19 (currently amended)

The apparatus as set forth in claim 1, wherein said optical delivery device further comprises endoscopic delivery means for delivering said combined treatment beam ~~within said substance~~ to said biological tissue.

Claim 20 (previously presented)

The apparatus as set forth in claim 1, wherein said optical delivery device further comprises: n optical components aligned on an optical path to receive said laser treatment beams from said n lasers, wherein each of said n optical components directs and combines one of said laser treatment beams of said n lasers along said optical path.

Claim 21 (previously presented)

The apparatus as set forth in claim 20, wherein said n optical components comprise at least one of a wavelength selective mirror, a beam splitter and a wavelength selective filter.

Claim 22 (previously presented)

The apparatus as set forth in claim 20, wherein said optical delivery device further comprises means for adjusting a position of one of said n optical components with respect to said optical path.

Claim 23 (previously presented)

The apparatus as set forth in claim 20, wherein said optical delivery device further comprises means for selecting at least two of said laser treatment beams to be included in said combined treatment beam.

Claim 24 (cancelled)

Claim 25 (previously presented)

The apparatus as set forth in claim 1, wherein said treatment is a medical treatment, and said laser treatment beams are medically useful treatment beams.

Claim 26 (currently amended)

The apparatus as set forth in claim 1, further comprising means for diagnosing said biological tissue substance ~~to determine said treatment~~.

Claim 27 (currently amended)

The apparatus as set forth in claim 26, wherein said means for diagnosing comprises a diagnostic system, wherein said diagnostic system maps an area of said biological tissue substance using fluorescent emission.

Claim 28 (original)

The apparatus as set forth in claim 1, wherein said apparatus is a handheld delivery apparatus.

Claim 29 (previously presented)

The apparatus as set forth in claim 28, wherein said handheld delivery apparatus is a portable and transferable miniature handheld delivery apparatus with dimensions no greater than 6" by 12" by 20".

Claim 30 (previously presented)

The apparatus as set forth in claim 1, further comprising a power source.

Claim 31 (currently amended)

A multiple laser treatment apparatus, comprising:

- (a) n lasers, wherein $n > 2$ and each of said n lasers delivers a laser treatment beam, and wherein said laser treatment beams have different laser beam parameters;
- (b) means for selecting at least two of said laser treatment beams for a treatment; ~~and~~
- (c) means for simultaneously delivering said selected ones of said laser treatment beams in a combined treatment beam at a substance that undergoes said treatment, and ~~wherein said combined treatment beam has a spot size that is less than 0.1 mm.~~

(d) a mirror-based scanner for scanning the combined treatment beam in a three-dimensional pattern within a volume of the substance, the mirror-based scanner including two or more reflective elements separated by an adjustable separation wherein adjusting the separation of the reflective elements scans the combined treatment beam within the volume.

Claim 32 (previously presented)

The apparatus as set forth in claim 31, wherein said laser treatment beams have at least one of different wavelengths, different fluences, different power levels, different energy levels, different temporal parameters, different geometrical parameters, different spot sizes, different linear delivery parameters and different three-dimensional delivery parameters.

Claim 33 (previously presented)

The apparatus as set forth in claim 31, wherein said means for selecting comprises an optical component to select a laser beam parameter of one of said laser treatment beams.

Claim 34 (previously presented)

The apparatus as set forth in claim 31, wherein said means for selecting comprises means for adjusting a laser beam parameter of one of said laser treatment beams.

Claims 35-39 (cancelled)

Claim 40 (previously presented)

The apparatus as set forth in claim 31, wherein said means for delivering comprises a micromanipulator.

Claim 41 (previously presented)

The apparatus as set forth in claim 31, wherein said means for delivering comprises endoscopic delivery means for delivering said combined treatment beam within said substance.

Claim 42 (cancelled)

Claim 43 (previously presented)

The apparatus as set forth in claim 31, further comprising means for diagnosing said substance to determine said treatment.

Claim 44 (currently amended)

The apparatus as set forth in claim 43, wherein said means for diagnosing comprises a diagnostic system, wherein said diagnostic system generates a fluorescent map ~~maps an area~~ of said substance using fluorescent emission.

Claim 45 (currently amended)

A method for laser treatment, comprising:

- (a) providing n lasers, wherein $n > 2$ and each of said n lasers delivers a laser treatment beam, and wherein said laser treatment beams have different laser beam parameters;
- (b) selecting at least two of said laser treatment beams for a treatment; and
- (c) simultaneously delivering said at least two of said laser treatment beams in a combined treatment beam at a substance that undergoes said treatment, and ~~wherein said combined treatment beam has a spot size that is less than 0.1 mm.~~
- (d) scanning said combined treatment beam in a three-dimensional pattern within a volume of the substance, wherein the scanning comprises adjusting a separation between two or more reflective elements.

Claim 46 (previously presented)

The method as set forth in claim 45, wherein said laser treatment beams have at least one of different wavelengths, different fluences, different power levels, different energy levels, different temporal parameters, different geometrical parameters, different spot sizes, different linear delivery parameters and different three-dimensional delivery parameters.

Claim 47 (previously presented)

The method as set forth in claim 45, wherein selecting said at least two of said laser treatment beams comprises providing an optical component to select a laser beam parameter of one of said laser treatment beams.

Claim 48 (previously presented)

The method as set forth in claim 45, wherein selecting said at least two of said laser treatment beams comprises adjusting a laser beam parameter of one of said laser treatment beams.

Claim 49 (previously presented)

The method as set forth in claim 45, wherein simultaneously delivering said at least two of said laser treatment beams comprises providing a mirror-based optical delivery device to deliver said combined treatment beam.

Claims 50-51 (cancelled)

Claim 52 (previously presented)

The method as set forth in claim 45, wherein simultaneously delivering said at least two of said laser treatment beams comprises providing a micromanipulator to deliver said combined treatment beam.

Claim 53 (previously presented)

The method as set forth in claim 45, wherein simultaneously delivering said at least two of said laser treatment beams comprises providing endoscopic delivery means for delivering said combined treatment beam within said substance.

Claim 54 (cancelled)

Claim 55 (previously presented)

The method as set forth in claim 45, further comprising providing means for diagnosing said substance to determine said treatment.

Claim 56 (currently amended)

The method as set forth in claim 55, wherein said means for diagnosing comprises a diagnostic system, wherein said diagnostic system generates a fluorescent map ~~maps an area~~ of said substance using fluorescent emission.

Claims 57-68 (cancelled)

Claim 69 (previously presented)

The apparatus as set forth in claim 1, wherein said optical delivery device further comprises a first mirror, and a second mirror, and means for adjusting a position of said first mirror with respect to said second mirror.

Claim 70 (cancelled)

Claim 71 (new)

The apparatus as set forth in claim 69, wherein said first mirror is convex and said second mirror is concave.

Claim 72 (new)

The apparatus as set forth in claim 1, wherein said optical delivery device is configured to preserve an optical mode of each of said laser treatment beams.

Claim 73 (new)

The apparatus as set forth in claim 1, further comprising means for selecting a treatment plan for said biological tissue.

Claim 74 (new)

The apparatus as set forth in claim 73, wherein said treatment plan specifies at least two of said laser treatment beams to be included in said combined treatment beam.

Claim 75 (new)

The apparatus as set forth in claim 73, wherein said means for selecting said treatment plan comprises means for selecting said treatment plan from a database of treatment plans.

Claim 76 (new)

The apparatus as set forth in claim 73, wherein said means for selecting said treatment plan comprises means for selecting said treatment plan based on data related to said biological tissue.

Claim 77 (new)

The apparatus as set forth in claim 73, wherein said means for selecting said treatment plan comprises means for selecting said treatment plan based on entered data, wherein entered data comprises at least one of patient data, treatment plan data, complaint data and disease data.

Claim 78 (new)

A laser treatment apparatus, comprising:

- (a) n lasers, wherein $n > 1$ and each of said n lasers is configured to deliver a laser treatment beam;
- (b) a mirror-based optical delivery device configured to accept the laser treatment beam from each of said n lasers, wherein said mirror-based optical delivery device comprises a convex mirror and a concave mirror and wherein said mirror-based optical delivery device combines the laser treatment beams into a combined laser treatment beam in which each of said laser treatment beams is essentially co-propagating;
- (c) a selection device that selects a laser beam parameter of one or more laser treatment beams for a treatment; and

wherein said mirror-based optical delivery device delivers said combined laser treatment beam to a substance that undergoes a treatment and scans said laser treatment beam in a three-dimensional scanning pattern within a volume of said substance.

Claim 79 (new)

The laser treatment apparatus as set forth in claim 78, wherein said mirror-based optical delivery device scans said laser treatment beam in a three-dimensional scanning pattern at least in part by adjusting a separation between the concave and convex mirror.

Claim 80 (new)

The apparatus as set forth in claim 79, wherein said laser beam parameter is one of a wavelength, a fluence, a power level, an energy level, a temporal parameter, a geometrical parameter, a spot size and a three-dimensional delivery parameter.

Claim 81 (new)

The apparatus as set forth in claim 79, further comprising means for generating a fluorescent map of said substance using fluorescent emission and means for analyzing said fluorescent map.

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